Profile

# Mike Dexter: a welcome appointment

Phyllida Brown

Few first-rate biologists start their careers with only one 'A-level' (High School qualification) and a job in a copper wire factory. Fewer still go on to command a research budget of £250 million a year. But then Mike Dexter, who takes over this summer as director of the UK's Wellcome Trust, the world's biggest medical research charity, has always done things his own way.

Dexter joins the Trust this month from the Paterson Institute for Cancer Research at the Christie Hospital, Manchester, where 25 years' work on the control of blood cell development have gained him international respect. He was the first to discover, among other things, how to grow stem cells *in vitro*. "It was a seminal contribution and it opened up generations of new experiments," says Gordon McVie, director-general of the Cancer Research Campaign, which funds the institute. With more than 320 papers under his belt and a fellowship of the Royal Society, Dexter is regarded as a scientist's scientist.

But his success was not exactly handed to him on a plate. The son of a Manchester engineer and a housewife, his first job was as a trainee production manager at Frederick Smith's copper wire factory. He realized he was bored after three months, took a job as a technician at the Paterson, got the extra 'A-levels' he needed at night school and went to the University of Salford to read biology in 1967, at the age of 22.

By then he had already married a trainee radiographer, so he lived out in a Cheshire village, not with his fellow students in a hall of residence. He was drawn to cancer research partly by the shock of learning, on returning from a holiday, that the young son of the farm labourer who lived next door had died of leukaemia. It is because his feet have always been on the ground that Dexter is an intensely practical man say his friends — and one who can communicate with anybody.

Life continued to be tougher for him than for many of his peers. He did his PhD while helping to raise twins, so research was juggled with nappies and broken nights. The relationship eventually ended; a second marriage and two more children followed. The experiences made Dexter profoundly aware of the need for a career structure in science that allows parents, whether women or men, to meet their responsibilities without falling behind.

The public (right) and private faces of Mike Dexter. (Photographs courtesy of *Cheshire Life* magazine.)

The Wellcome Trust's decision to appoint a respected scientist rather than a business executive, as some had feared, has reassured biomedical researchers. Although Dexter is by no means shy of industry — he co-founded Therexsys, a gene therapy start-up company — he is a passionate defender of good science and he sees the Trust's job as fostering excellence in research. "I want to see people given the freedom to develop ideas," he says. Pressure to publish, regardless of quality, has put this freedom under threat, he believes.

"There are occasions when you are doing three to four years of bloody good work, but not getting publications out," he says. "The more difficult the problem the more I want people to go into it, but the less likely they are in the short term to come up with the easy, quick solution." Not that he is offering anyone a meal ticket. Since becoming the director of the Paterson last year, he has gained a reputation for rigour and, if necessary, toughness.

Dexter's areas of scientific interest are outside the traditional scope of the Wellcome Trust, whose founder, Sir Henry Wellcome, explicitly excluded cancer research from its remit. In some eyes, this makes Dexter a surprise choice for the job. But Dexter does not think of himself as a 'cancer biologist'. "It's such a misleading term," he says. At the cellular and molecular levels, biomedical research is not narrowly restricted to specific diseases, he argues. In any case, Dexter is considered to have an excellent grasp of the bigger biomedical picture: he chaired the Medical Research Council's Molecular and Cellular Medicine Board between 1994 and 1996.

He has no shortage of ideas about where the Trust should put its muscle next. For example, he is keen to expand veterinary science, particularly to tackle the problems plaguing agriculture, such as BSE (Bovine Spongiform Encephalopathy) and salmonella. And he also wants more research on unglamorous but common diseases such as rheumatoid arthritis.

Dexter is clearly someone who has learned to live comfortably with the absurd contradictions of life. He knows how to let his hair down, say friends: he has a reputation for bringing a guitar to conferences, and singing songs that get bawdier as the evening progresses. (He admitted this unprompted, although he

wouldn't sing any — but then we met in the lobby of a rather posh hotel.) He also reads poetry widely, from Pablo Neruda to Wordsworth. And, to the affectionate embarrassment of his erstwhile bosses at the Cancer Research Campaign, he has a weakness for a quiet smoke.

Coming from outside the hallowed league of 'Oxbridge', London and Edinburgh, Dexter has been seen as anti-Establishment. "He's certainly not a man in a grey suit: I don't think he will be anyone's poodle," says Robin Weiss, head of the Chester Beatty Laboratories at the Institute of Cancer Research in London. It would be wrong, however, to portray him as a knee-jerk rebel. "He's not anti-The System, he's just not afraid to criticise it," says Gordon McVie. "And he's open to ideas wherever they come from."

He will be under pressure from some researchers to make changes within the Wellcome Trust. Critics claim that the Trust is run as a coterie, with major awards sometimes appearing to land rather close to some of its governors. If Dexter has any sympathy with the critics, he is not saying so. He says, carefully, that the governors include some of the best scientific brains in Britain and that it would be alarming if they were not being funded by organisations such as the Trust and the Medical Research Council.

Dexter's friends do not expect him to rush in and make feathers fly. They think, instead, that he will do what he has always done — listen to all views carefully, including the views of the hitherto unheard, and then make up his own mind. Judging by his track record so far, that looks like good news for British biomedicine.

Phyllida Brown is a science writer based in London.

## Gazetteer

# Kew Millennium Seed Bank Appeal

***What is it famous for?*** For botanists and horticulturalists, it is one of the largest, most exciting conservation projects ever undertaken. But anyone outside the field is more likely to have heard of the appeal's patron — TV naturalist Sir David Attenborough — than of the seed bank itself.

***How did it start?*** In 1974, The Royal Botanic Gardens, Kew (http://www.rbgkew.org.uk) started a seed bank at Wakehurst Place in West Sussex, UK, in an attempt to provide a cache of some of the world's botanical genetic diversity. The seed bank has successfully collected and stored seeds of some 4,000 wild plant species since 1974 and is now the most comprehensive collection of wild species in the world. (Most other seed banks have been used only to collect and store commercial seed.) The Millennium Seed Bank Appeal was launched on 31 May 1996.

***What is the aim?*** To extend the existing seed bank to include almost all the UK flora by the year 2000 and a further 10% of the rest of the world's flora — a further 25,000 species — by 2010.

***Why use seed banks?*** Seed banking may prove the most effective and economical means of ensuring the survival of plant species. The Millennium Seed Bank already holds some of the most threatened of the UK flora, like the clove-scented broomrape (*Orobanche caryophyllacae*). In 1992, the international Convention on Biological Diversity formally recognised the need for concerted global action in this decade to slow down the rate of loss of genes, species and ecosystems. The convention pragmatically acknowledged that conservation of whole ecosystems intact would probably be unattainable and made recommendations for *ex situ* conservation. In other words, "gather ye rosebuds while ye may" because you'll probably need them later.

***So, are seed banks simply a form of stamp-collecting?*** No. Plant species earn their place in the seed bank on the basis not only of rarity but also of their potential. In the future, reintroduction of species may prove critical in halting land degradation and in regeneration of 'brownfield' sites — not to mention the pharmaceutical wealth that could be held in many plant species. It will be interesting to see whether the chemicals giants will be paying 'bank charges' for withdrawals beyond the millennium.

The shrub *Parkinsonia aculeata* – stored in the Millenium Seed Bank – is an example of a 'solid investment' in seed banking terms. It can be grown in moist tropical soil and in desert washes, where it can help control erosion of sandy soil. It can also be used to treat fever, dysentery and as an antiseptic, and for firewood, charcoal and construction.

***Why base the bank at Kew?*** With more than two centuries of plant collecting and of horticultural expertise, it has built up strong connections with research institutes worldwide, which will be essential for the collection of seeds internationally.

***Who provides the funding?*** The UK Millennium Commission agreed to grant up to £30 million on the basis that matching funds could be raised. By Autumn 1997 the appeal had raised more than £17.4 million, including £9.2 million from the Wellcome Trust — perhaps because of the biomedical potential of the cache.